

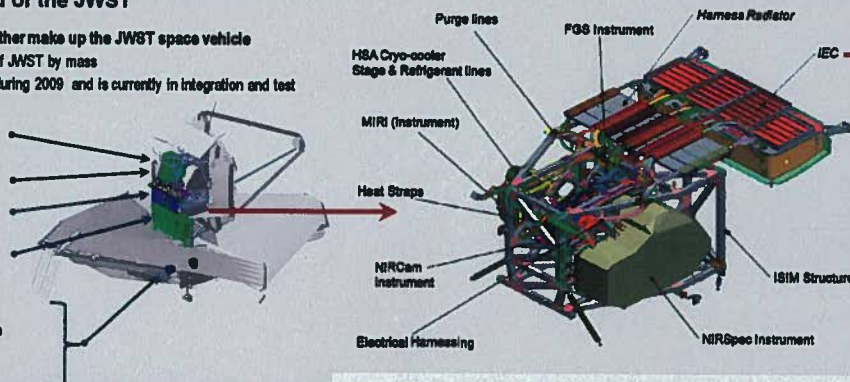
Status of the JWST Integrated Science Instrument Module

M. A. Greenhouse, J. Dunn, R. Kimble, S. Lambros, R. Lundquist, B. Rauscher, and M. Voyton
NASA Goddard Space Flight Center



The Integrated Science Instrument Module (ISIM) is the science instrument payload of the JWST

- ISIM is one of three elements that together make up the JWST space vehicle
 - Approximately 1.4 metric tons, ~20% of JWST by mass
 - Completed its Critical Design Review during 2009 and is currently in integration and test
- The ISIM system consists of:
 - Four science instruments
 - NIRCam, NIRSpec, MIRI, FGS
 - Nine instrument support systems:
 - Optical metering structure system
 - Electrical Harness System
 - Harness Radiator System
 - ISIM electronics compartment
 - ISIM Remote Services Unit
 - Cryogenic Thermal Control System
 - Command and Data Handling System
 - Flight Software System
 - Operations Scripts System

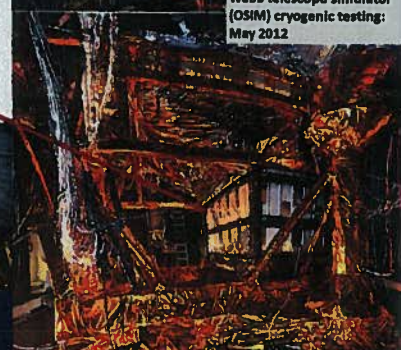
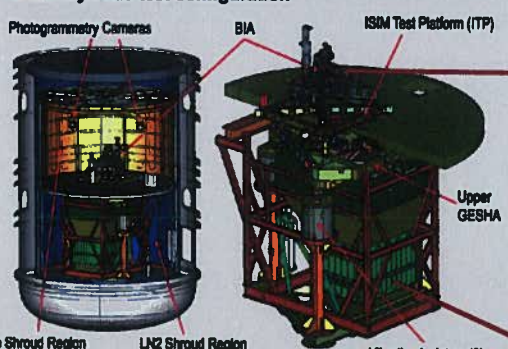


Flight I&T of the Webb science instrument payload (ISIM) is proceeding on schedule
All ISIM instruments and support systems are delivered to ISIM I&T within the next 10 months
Cryogenic testing of the Webb telescope simulator began during May 2012

ISIM will be tested at ~35 K in a space environment simulation chamber using a telescope simulator (OSIM)



OSIM cryo-vac test configuration



ISIM structure: 80 um repeatability, <500 um distortion over 300 to 90 K



ISIM structure strength proof test



Webb cryogenic telescope simulator (OSIM)



OSIM lift into SES chamber



The ISIM element is on schedule for integration with the telescope element during 2015
The first of three ISIM cryo-vacuum test cycles will begin during Spring 2013

MIRI: Delivered May 2012



NIRCam: Ship Nov 2012



NIRSpec: Ship Apr 2013



FGS/NIRSS: Ship Aug 2012



For further information, contact: matt.greenhouse@nasa.gov or visit: www.jwst.nasa.gov